Claims:

1. A photocurable dental restorative comprising (i) 100 parts by weight of a polymerizable monomer, (ii) 0.01 to 5 parts by weight of a photopolymerization initiator of acylphosphine oxide, and (iii) 200 to 1900 parts by weight of an inorganic filler, wherein the inorganic filler (iii) is a mixed filler of:

(A) irregular-shaped inorganic particles having an average particle size of not smaller than 0.1 μm but smaller than 1 μm;

(B) spherical inorganic particles having an average primary particle size of not smaller than 0.1 μm but not larger than 5 μm; and

(C) fine inorganic particles having an average primary particle size of not larger than 0.1 μm;

which are so blended as to satisfy the following mass ratios ① to ③:

① mA/(mB + mC) = 0.2 to 3

② mB/(mB + mC) = 0.5 to 0.99

③ mC/(mB + mC) = 0.01 to 0.5

where mA, mB and mC are masses of the inorganic particles (A) to (C).

2. A photocurable dental restorative according to claim 1, wherein said mixed filler (iii) is obtained by so blending the inorganic particles (A) to (C) as to satisfy the following mass ratios ①' to ③';

①' mA/(mB + mC) = 0.4 to 2.3

②' mB/(mB + mC) = 0.6 to 0.9

③' mC/(mB + mC) = 0.1 to 0.4.

3. A photocurable dental restorative according to claim 1, wherein in said mixed filler (iii), a maximum size of aggregates of primary particles of the spherical inorganic particles (B) and a maximum size of aggregates of primary particles of the fine inorganic particles (C)

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are not larger than 20 μm, respectively, and a total amount of the aggregates thereof is not larger than 20% by volume of the whole mixed filler (iii).

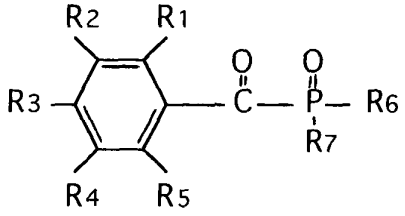
4. A photocurable dental restorative according to claim 1, wherein said spherical inorganic particles (B) have an average primary particle size of not larger than 1 μm.

5. A photocurable dental restorative according to claim 1, wherein said fine inorganic particles (C) have an average primary particle size of from 0.05 to 0.09 μm.

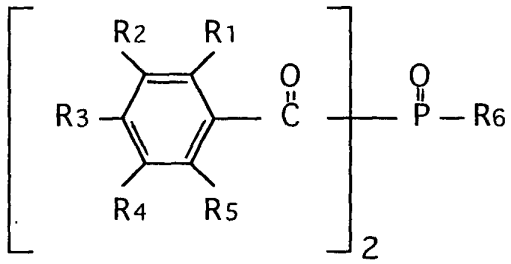
6. A photocurable dental restorative according to claim 1, wherein said mixed filler (iii) has a volume of the pores of not smaller than 0.08 μm due to strongly aggregated particles of not larger than 0.1 cc/g.

7. A photocurable dental restorative according to claim 1, wherein said mixed filler (iii) has at least one distribution peak at a position of a particle size of not larger than 0.1 μm and at a position of a particle size of not smaller than 0.1 μm but not larger than 1 μm, respectively, on particle size distribution based on the volume of particles, but has no distribution peak at a position of a particle size in excess of 5 μm.

8. A photocurable dental restorative according to claim 1, wherein said acylphosphine oxide is represented by the following general formula (I) or (II):



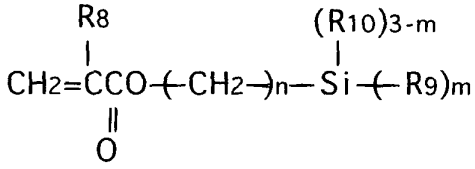
(I)



(II)

wherein each of R_1, R_2, R_3, R_4 and R_5 is any one of the groups selected from the group consisting of a hydrogen atom, a halogen atom, an alkyl group, an alkoxy group, an alkylthio group, and a substituted or unsubstituted aryl group, and each of R_6 and R_7 is any one of the groups selected from the group consisting of a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkenyl group, and a substituted or unsubstituted aryl group.

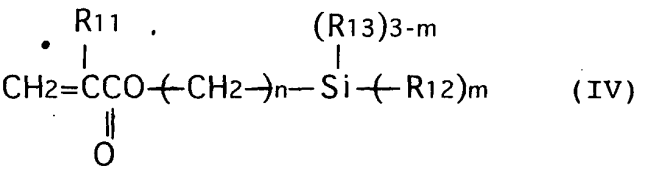
9. A photocurable dental restorative according to claim 1, wherein said irregular-shaped inorganic particles (A) are treated for their surfaces with a silane coupling agent represented by the following general formula (III),



(III)

wherein R_8 is a hydrogen atom or a methyl group, R_9 is an alkoxy group, a chlorine atom or an isocyanate group, R_{10} is an alkyl group having 1 to 6 carbon atoms, m is an integer of 2 to 3, and n is an integer of 8 to 20,

and said fine inorganic particles (C) are treated for their surfaces with a silane coupling agent represented by the following general formula (IV),



(IV)

wherein R_{11} is a hydrogen atom or a methyl group, R_{12} is an alkoxy group, a chlorine atom or an isocyanate group, R_{13} is an alkyl group having 1 to 6 carbon atoms, m is an integer of 2 to 3, and n is an integer of 2 to 3.

10. A photocurable dental restorative according to claim 1, wherein an amine compound is contained in an amount of from 0.01 to 5 parts by weight per 100 parts by weight of the polymerizable monomer (i).

11. A method of producing a photocurable dental restorative by preparing an inorganic filler by mixing:

(A) irregular-shaped inorganic particles having an average particle size of not smaller than 0.1 μm but smaller than 1 μm;

(B) spherical inorganic particles having an average primary particle size of not smaller than 0.1 μm but not larger than 5 μm; and

(C) fine inorganic particles having an average primary particle size of not larger than 0.1 μm;

so as to satisfy the following mass ratios ① to ③:

① mA/(mB + mC) = 0.2 to 3

② mB/(mB + mC) = 0.5 to 0.99

③ mC/(mB + mC) = 0.01 to 0.5

where mA, mB and mC are masses of the inorganic particles (A) to (C),

and by mixing 100 parts by weight of a polymerizable monomer, 0.01 to 5 parts by weight of a photopolymerization initiator of acylphosphine oxide, and 200 to 1900 parts by weight of said inorganic filler.